

70506-248

2/6/2013

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF
CHEMICAL SAFETY AND
POLLUTION PREVENTION

Gary Orr
United Phosphorus, Inc.
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406

FEB 6 2013

Subject: Application for Pesticide Notification (PRN 98-10)
Current Aquatic Herbicide
EPA Registration No. 70506-248
Decision No. 473661
Submission Date: 12/27/12 and resubmission 1/16/13

Dear Mr Orr:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The Agency acknowledges the updated warranty statement and the ABN "Current."

The label submitted with the application has been stamped "Notification" and will be placed in our records. If you have questions concerning this letter, please contact Dominic Schuler at (703) 347-0260 or via email at schuler.dominic@epa.gov.

Sincerely,

A handwritten signature in black ink that reads "Tony Kish".

Tony Kish
Product Manager 22
Fungicide Branch
Registration Division (7504P)

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NOTIFICATION

FEB 6 - 2013

CURRENT AQUATIC HERBICIDE

For use in Fresh Water Lakes, Potable Water Reservoirs, Ponds (including Golf Course Ponds), Fish Hatcheries, and Other Such Slow Moving or Quiescent Bodies of Water
Water treated with Current may be used immediately after treatment for recreational activities.

ACTIVE INGREDIENT		
Copper sulfate pentahydrate (CAS No. 7758-99-8)	31.27%*
OTHER INGREDIENTS	68.73%
TOTAL	100.00%

*8.0% elemental copper
One Gallon Contains 0.8 Pounds of Elemental Copper

KEEP OUT OF THE REACH OF CHILDREN	
WARNING/AVISO	
<i>Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)</i>	
FIRST AID	
IF SWALLOWED:	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
IF IN EYES:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. • Remove contact lenses, if present, after the first five minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.
IF INHALED:	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For medical emergencies involving this product, call toll free 1-888-875-1724.	
See Label for Additional Precautions and Directions for use.	

United Phosphorus, Inc.
630 Freedom Business Center
King of Prussia, PA 19406 • 1-800-438-6071

EPA Reg. No. 70506-248
EPA Est. No. _____

Net Contents _____

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**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
WARNING**

May be fatal if swallowed. Harmful if absorbed through skin. Harmful if inhaled. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Avoid breathing vapor or mist. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Personal Protective Equipment (PPE)

Mixers, loaders, applicators, and other handlers must wear the following:

- Long-sleeved shirt and long pants,
- Shoes and socks, and
- Chemical-resistant gloves made of barrier laminate, nitrile rubber, neoprene rubber or viton.

User Safety Requirements

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent material that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates. Waters treated with this product may be hazardous to aquatic organisms. Treatment of aquatic weeds and algae can result in oxygen loss from decomposition of dead algae and weeds. This oxygen loss can cause fish and invertebrate suffocation. To minimize this hazard, do not treat more than 1/2 of the body of water to avoid depletion of oxygen due to decaying vegetation. Wait at least 10 to 14 days between treatments. Begin treatment along the shore and proceed outwards in bands to allow fish to move into untreated areas. Consult with the State or local agency with primary responsibility for regulating pesticides before applying to public waters, to determine if a permit is required. Certain water conditions including low pH (<6.5), low dissolved organic carbon (DOC) levels (3.0 mg/L or lower), and "soft" waters (i.e., alkalinity less than 50 mg/L), increases the potential acute toxicity to non-target aquatic organisms.

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STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage and disposal.

PESTICIDE STORAGE: Store in a cool, dry place.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Handling: Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

NONREFILLABLE CONTAINER: Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Offer for recycling, if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

SPRAY DRIFT MANAGEMENT

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and method of application (e.g., ground, aerial, airblast, chemigation) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

Droplet Size

Apply only as a medium or coarser spray (ASAE standard 572) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.

Wind Speed

Do not apply at wind speeds greater than 15 mph. Only apply this product if the wind direction favors on-target deposition (approximately 3 to 10 mph), and there are no sensitive areas within 250 feet downwind.

Temperature Inversions

If applying at wind speeds less than 3 mph, the applicator must determine if a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzle height. Do not make applications into areas of temperature inversions or stable atmospheric conditions.

Other State and Local Requirements

Applicators must follow all state and local pesticide drift requirements regarding application of copper compounds. Where states have more stringent regulations, they must be observed.

Equipment

All aerial and ground application equipment must be properly maintained and calibrated using

appropriate carriers or surrogates.

Additional requirements for aerial applications:

- The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.
- Release spray at the lowest height consistent with efficacy and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.
- When applications are made with a crosswind, the swath must be displaced downwind. The applicator must compensate for this displacement at the up and downwind edge of the application area by adjusting the path of the aircraft upwind.

Additional requirements for ground boom application:

Do not apply with a nozzle height greater than 4 feet above the crop canopy.

PRODUCT INFORMATION

Current may be applied to fresh water lakes, potable water reservoirs, ponds (including golf course ponds), fish hatcheries and other such slow moving or quiescent bodies of water.

Weeds Controlled:

Brazilian Elodea (*Egeria densa*), Common Elodea (*Elodea canadensis*), Coontail (*Ceratophyllum demersum*), Hydrilla (*Hydrilla verticillata*), Southern/Northern Naiads (*Najas* sp.), Water Lettuce (*Pistia stratiotes*), and Water Hyacinth (*Eichhornia crassipes*).

Additional Weeds Controlled in Soft Waters:

Eurasian Watermilfoil (*Myriophyllum spicatum*), Sago Pondweed (*Potamogeton pectinatus*), and American Pondweed (*Potamogeton nodosus*).

Unless specifically prohibited by the mix partner label, Current may be tank mixed with fluridone, diquat and endothal, as part of a broader spectrum weed control program (specific instructions for tank mixes are given in the directions for use). If a product is tank mixed with Current, the most stringent requirements of the Current and mix partner labels must be met.

Because Current works through absorption into the plant, it must be applied in a way that maximizes contact with the target aquatic weeds. Apply Current during periods of active weed growth to the leaf surfaces in areas of dense weed foliage. Algae and silt in the water column, or on the weed surfaces, will reduce the herbicidal effect of Current by competitively removing the product from the water column. Interference with Current's activity due to the presence of algae can be mitigated by tank mixing Current, with a copper based algacide, such as Symmetry, or pre-treating the area with Symmetry.

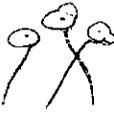
Surface applications of Current may be made using a land-based sprayer, or spray boat. Weighted trailing hoses are recommended for subsurface applications. Where appropriate, Current can be applied as an invert emulsion, or as an admixture with a suitable polymer, (see specific instructions, and only select adjuvants approved for application in food crop production). In order to assure uniform coverage of the treated area, the applicator may use Current as an undiluted product or may make an initial dilution prior to application.

Because it must be adsorbed into the plant to be effective, applications of Current should be made when contact times of at least 12 to 24 hours can be obtained. Effective treatment is indicated by the submergence of target vegetation 3 to 7 days after treatment. If necessary, repeat applications of Current may be made. Applicator should wait 14 days before re-treatment. The full effect of the treatment will require up to six weeks after the initial effect is observed.

Solutions of Current with cupric ion concentrations in excess of 1.0 ppm may cause non target plant

injury. Do not allow sprays to drift over crops, ornamentals, grass or other desirable plants. Observe all label restrictions.

Decomposition of dead plant material can result in dissolved oxygen depletion and subsequent fish kill. High water temperatures and dense weed infestation are exacerbating factors. To avoid excessive oxygen depletion and fish kill, treat no more than 1/2 of the water body at one time. Do not apply more Current than required for the treatment area, and allow 10 to 14 days before making application to the remaining portion of the water body. Avoid trapping fish between the shoreline and treatment areas by treating from the shore outward toward deeper, untreated water.

COMMON PONDWEEDS				
Elodea 	Coontail 	Hydrilla 	Naiads 	Eurasian Watermilfoil 
Sago Pondweed 	American Pondweed 	Water Lettuce 	Water Hyacinth 	Duckweed 

WATER USE RESTRICTIONS

For applications in waters destined for use as drinking water, those waters must receive additional and separate potable water treatment. Do not apply more than 1.0 ppm as metallic copper in these waters.

Application Rates for Aquatic Weed Control or Suppression in Quiescent or Slow Moving Water*

Hydrilla verticillata (Hydrilla) is controlled at application rates equivalent to 0.75 – 1.0 ppm Cu⁺⁺.

Weeds suppressed at application rates ranging from 0.50 to 1.0 ppm Cu⁺⁺ are: Egeria densa (Brazilian Elodea), Najas sp. (Southern/Northern Naiads), Ceratophyllum demersum (Coontail), and Elodea canadensis (Common Elodea).

Weeds suppressed at application rates ranging from 0.75 to 1.0 ppm Cu⁺⁺ are: Eichhornia crassipes (Water Hyacinth), Myriophyllum spicatum** (Eurasian Watermilfoil), Pistia stratiotes (Water Lettuce), Potamogeton nodosus** (American Pondweed), and Potamogeton pectinatus** (Sago Pondweed).

* Light weed infestation allows use of lower rate, and high weed density requires higher rate.

** Control can be obtained in low hardness waters.

Crop	Maximum per Application Rate (lbs Cu ²⁺ /A)	Maximum Annual Rate (lbs Cu ²⁺ /A)	Minimum Retreatment Interval	Notes
Algae,	1 ppm	N/A	14 days	No more than

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cyanobacteria, aquatic weeds (Elodea spp., hydrilla, Potamogeton spp., irrigation canal weed, annual naiads) for all aquatic applications				½ of the water body may be treated at one time. If the treated water is to be used as a source of potable water, the metallic copper concentration must not exceed 1 ppm.
Algae control in aquaculture when fish are present	0.4 ppm	N/A	N/A	

APPLICATION RATE CALCULATION

For large treatment areas it is most convenient to determine the surface area in acres and the average depth in feet.

The average depth is defined as the cumulative total of a series of depth measurements divided by the number of measurements made. The accuracy of the average will increase with increasing measurements.

The area of a rectangular treatment area is its length in feet times its width in feet, and the area of a circular treatment is the square of its radius (in feet) that is then multiplied by 3.14. The result of either calculation is area in square feet. This result is divided by 43,560 to give the area in acres

The amount of material to be applied to this multi-acre site is calculated by using the following formula and the desired copper concentration:

$$\text{Target [Cu}^{++}] \text{ (ppm)} \times \text{Ave. Depth (feet)} \times \text{Surface Area (acres)} \times 3.34 = \text{Gallons of Current}$$

Table 1 provides the results of this calculation on a per acre basis for 1 to 10 foot average water depths in 1 foot increments for target copper concentrations of 0.5, 0.75, and 1.0 ppm.

Table 1. Application Rate Data for Large Treatment Areas

Average Water Depth of Treatment Site (feet)	Gallons of Current per Surface Acre to Achieve the Desired Copper Concentration		
	0.5 ppm	0.75 ppm	1.0 ppm
1	1.7	2.5	3.3
2	3.3	5.0	6.7
3	5.0	7.5	10.0
4	6.7	10.0	13.4
5	8.4	12.5	16.7
6	10.0	15.0	20.0
7	11.7	17.5	23.4
8	13.4	20.0	26.7
9	15.0	22.5	30.1
10	16.7	25.1	33.4

For smaller treatment areas it is more convenient to calculate the amount of Current necessary in terms of ounces per 1,000 square ft.

The raw surface area in square feet is divided by 1000 to give the number of thousand square foot increments and this value is entered into the following calculation.

Target [Cu⁺⁺] (ppm) x Ave. Depth (feet) X Surface Area (1000 sq. ft.) X 10= Ounces of Current

Table 2 provides the results of this calculation on a per 1000 square feet basis for 1 to 10 foot average water depths in 1 foot increments for target copper concentrations of 0.5, 0.75, and 1.0 ppm.

Table 2. Application Rate Data for Smaller Treatment Areas

Average Water Depth of Treatment Site (feet)	Fluid Ounces of Current per 1,000 Square Feet to Achieve the Desired Copper Concentration		
	0.5 ppm	0.75 ppm	1.0 ppm
1	5.0	7.5	10.0
2	10.0	15.0	20.0
3	15.0	22.5	30.0
4	20.0	30.0	40.0
5	25.0	37.5	50.0
6	30.0	45.0	60.0
7	35.0	52.5	70.0
8	40.0	60.0	80.0
9	45.0	67.5	90.0
10	50.0	75.0	100.0

METHODS OF APPLICATION

SPRAY BOAT

Surface Application: Surface applications are appropriate for shallow depths of 4 feet or less.

Subsurface Application: Subsurface applications of Current are recommended for water depths

exceeding 4 feet. Weighted trailing hoses should be set to deliver the recommended rate of Current over the leaf surfaces in zones containing dense foliage. Subsurface application can be used for direct or invert applications of Current. Avoid dragging the hoses on the bottom.

Invert Application: Tank mix or bi-fluid mixer techniques can be used to produce inverts with Current. Inverts are not suited for surface application and should only be applied subsurface through submerged, weighted trailing hoses. Do not drag hoses on the bottom.

The invert emulsion disperses into tiny adherent droplets which will deposit on submerged leaf surfaces and over time these droplets will break to release the herbicide in close proximity to the plant. The ideal invert emulsion will be heavier than water and will have a thick viscous consistency. It will deliver the product quickly enough to allow absorption, but not so fast as to be carried away from the application site.

Choose approved adjuvants before producing an invert emulsion with Current. Example invert preparations are provide below to serve as a guide only. Test the system to be used prior to application to ensure good results. The properties of the invert system can be modified through small adjustments to the component ratios.

Table 3. Approximate Invert System Ratios

Mixer System	Water (gallons)	Invert Oil (gallons)	Current (gallons)
Tank Mix	80	3	8
Bi-Fluid	60	3	16

Direct application of Current is preferable to invert application in areas of dense weed populations as a streaking effect may be observed following invert application in such cases. This effect is a result of localized control along the paths taken by the weighted hoses. Allow adequate time for Current to work, immediate reapplication of Current may not increase effectiveness.

Polymer Application (Except CA): Spray sinking, deposition, and retention may be improved by addition of a polymer to Current itself or to a dilution of Current in water. Follow the recommendations on the polymer product label governing the use of that product in aquatic weed control.

SPRAY EQUIPMENT

Surface Application: Surface applications are appropriate for shallow depths of 4 feet or less.

Polymer Application (Except CA): Use the recommended rate of sinking agent in spray solution of Current plus water. Make up the spray solution so as to apply Current at the recommended rate in a total volume of 100 to 400 gallons per acre. Agitation must be initiated prior to the addition of the polymer and maintained throughout the application. The polymer-Current mixture will have a stringy constancy and will cling to the aquatic weed surfaces. Applications to slow moving water should be made to the densest mass of foliage at a speed of 4 to 5 mph in a direction opposite to the water flow.

TANK MIXING

Unless specifically prohibited by the mix partner label, Current may be tank mixed with products containing the active ingredients fluridone, diquat and endothall, as part of a broader spectrum aquatic weed control program. If a product is tank mixed with Current the more stringent requirements of the Current and mix partner labels must be met. Algae on plant surfaces will interfere with the action of Current aquatic herbicide. Improved control can be obtained in such cases by prior application of Symmetry. Table 4 gives example directions for tank mixes of Current with fluridone, diquat and endothall based products.

Table 4. Example Tank Mixes for Current and Diquat, Endothall, and Fluridone Products

Mix Partner	Amount Of Mix Partner	Amount of Current	Amount of Water	Additive	Rate	Application Method
1. Diquat (35.3%)	10 gal.	20 gal	100 gal	2 gal Nalquatic	20 gal/A	Surface Spray or subsurface injection
2. Endothall (40.3%)	15 gal	20 gal	100 gal	N/A	20 gal/A	Surface spray or subsurface injection
3. Fluridone (41.7%)	1.5 qt	20 gal	100 gal	N/A	20 gal/A	Surface spray or subsurface injection

Notes:

- 1: Weeds controlled by this tank-mix are: Bladderwort, Cattail, Common Elodea, Common Salvinia, Coontail, Curlyleaf Pondweed, Duckweed, Eurasian Watermilfoil, Floatingleaf Pondweed, Hydrilla, Leafy Pondweed, Pennywort, Richardson Pondweed, Sago Pondweed, Slender Naiad, Small Pondweed, Southern Naiad, Water Hyacinth, and Water Lettuce,
- 2: Weeds controlled by this tank-mix are: American Pondweed, Chara, Cladophora, Coontail, Najas Elodea, Pithophora, Potamogeton, Sago Pondweed, Spirogyra, Vallisneria, Watermilfoil, and Zannichellia,
- 3: Weeds controlled by this tank-mix are American Pondweed, Bladderwort, Brazilian Elodea, Common Duckweed, Common Elodea, Coontail, Fanwort (Cabomba), Naiad, Najas Elodea, Paragrass, Sago Pondweed, Spatterdock, and Watermilfoil,

**IMPORTANT INFORMATION
READ BEFORE USING PRODUCT**

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc. and Seller harmless for any claims relating to such factors.

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